

UNIVERSITY OF LOUISIANA AT LAFAYETTE

PHYSICS 202

Catalog Data: General Physics II. (4,0,4). Electricity, magnetism, optics, quantum physics, waves and particles, atomic and nuclear physics. Prereq: Phys 201, Coreq: Math 302.

Textbook: *Fundamentals of Physics*, by Halliday & Resnick, 8th Ed., Extended

Coordinator: John R. Meriwether, Professor of Physics and Head of the Department

Topics: [with contact hours (50 min. periods) spent on each]

1. Charge and Matter (2 hr)
2. The Electric Field (3 hrs)
3. Gauss' Law (3 hrs)
4. Electric Potential (3 hrs)
5. Capacitors and Dielectrics (3 hrs)
6. Current and Resistance (3 hrs)
7. Electromotive Force and Circuits (3 hrs)
8. The Magnetic Field (3 hrs)
9. Ampere's Law (3 hrs)
10. Faraday's Law of Induction (3 hrs)
11. Inductance (2 hrs)
12. Magnetic Properties of Matter (1 hr)
13. Electromagnetic Oscillations (3 hrs)
14. Alternating Currents (3 hrs)
15. Maxwell's Equations (2 hrs)
16. Electromagnetic Waves (3 hrs)
17. Geometrical Optics (4 hrs)
18. Interference (3 hrs)
19. Diffraction (3 hrs)
20. Light and Quantum Physics (3 hrs)
21. Waves and Particles (2 hrs)

Grades: Grades will be assigned based on the students' performance on examinations, quizzes, and/or other assignments. A schedule of these will be provided separately.